

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): Rear-projection screen ~~encompassing that comprises~~  
at least one light-scattering polymethyl methacrylate layer, ~~which comprises the rear-~~  
projection screen comprising:

a polymethyl methacrylate matrix; ~~and~~

spherical scattering particles (A); and

spherical particles (B) with a ~~different~~ median particle size  $V_{50}$  different than the  
median particle size of the spherical scattering particles (A), where

wherein the spherical scattering particles (A) have a median size  $V_{50}$  in the range from  
0.1 to 40  $\mu\text{m}$ , the difference between the refractive index of the spherical scattering particles  
(A) and that of the polymethyl methacrylate matrix being in the range from 0.02 to 0.2, ~~where~~

wherein the spherical particles (B) have a median size  $V_{50}$  in the range from 10 to  
150  $\mu\text{m}$ , the difference between the refractive index of the spherical particles (B) and that of  
the polymethyl methacrylate matrix being in the range from 0 to 0.2, and ~~where~~

wherein the total concentration of the spherical scattering particles (A) and particles  
(B) is in the range from 1 to 60% by weight, based on the weight of the light-scattering  
polymethyl methacrylate layer, ~~characterized in that~~

wherein the concentration of the spherical scattering particles (A)  $c_{PA}$ , the thickness of  
the light-scattering polymethyl methacrylate layer  $d_s$  and the size of the spherical scattering  
particles (A)  $D_{PA}$  is selected in such a way that the ratio  $c_{PA} \cdot d_s / D_{PA}^3$  is in the range from  
0.001 to 0.015% by weight\*mm/ $\mu\text{m}^3$ , the concentration of the spherical particles (B)  $c_{PB}$ ,

wherein the thickness of the light-scattering polymethyl methacrylate layer  $d_s$  and the  
size of the spherical particles (B)  $D_{PB}$  is selected in such a way that the ratio  $c_{PB} \cdot d_s / D_{PB}^3$  is in  
the range from 0.000005 to 0.002% by weight\*mm/ $\mu\text{m}^3$  and the ratio of the square of average

surface roughness of the polymethyl methacrylate layer  $R_Z$  to the third power of the size of the spherical particles (B)  $R_Z^2/D_{PB}^3$  is in the range from 0.0002 to  $0.1300 \mu\text{m}^{-1}$ .

Claim 2 (Currently Amended): Rear-projection screen according to Claim 1, ~~characterized in that wherein~~ the ratio of the square of average surface roughness of the polymethyl methacrylate layer  $R_Z$  to the third power of the size of the spherical particles (B)  $R_Z^2/D_{PB}^3$  is in the range from 0.0025 to  $0.0600 \mu\text{m}^{-1}$ .

Claim 3 (Currently Amended): Rear-projection screen according to Claim 1 ~~or 2~~, ~~characterized in that wherein~~ the ratio of concentration of the particles (B)  $c_{PB}$  to the thickness of the light-scattering polymethyl methacrylate layer  $d_S$   $c_{PB}/d_S$  is greater than or equal to 2.5% by weight/mm.

Claim 4 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the gloss  $R_{85^\circ}$  of the light-scattering polymethyl methacrylate layer is smaller than or equal to 40.

Claim 5 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the ratio  $c_{PA} * d_S/D_{PA}^3$  is in the range from 0.0025 to 0.009% by weight\*mm/ $\mu\text{m}^2$ .

Claim 6 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the ratio  $c_{PB} * d_S/D_{PB}^3$  is in the range from 0.00004 to 0.0015% by weight\*mm/ $\mu\text{m}^2$ .

Claim 7 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims-Claim 1, characterized in that wherein~~ the thickness of the light-scattering polymethyl methacrylate layer is in the range from 0.05 to 1 mm.

Claim 8 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims-Claim 1, characterized in that wherein~~ the spherical scattering particles (A) and/or spherical particles (B) encompass crosslinked polystyrene, polysilicone and/or crosslinked poly(meth)acrylates.

Claim 9 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims-Claim 1, characterized in that wherein~~ the light-scattering polymethyl methacrylate layer has been coloured.

Claim 10 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims-Claim 1, characterized in that wherein~~ the matrix of the light-scattering polymethyl methacrylate layer has a refractive index in the range from 1.46 to 1.54, measured for the sodium D line (589 nm) and at 20°C.

Claim 11 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims-Claim 1, characterized in that wherein~~ the average surface roughness  $R_z$  of the screen is in the range from 4 to 50  $\mu\text{m}$ .

Claim 12 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims-Claim 1, characterized in that wherein~~ the median size  $V_{50}$  of the spherical particles (B) is greater by at least 5  $\mu\text{m}$  than the median size of the scattering particles (A).

Claim 13 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the median size  $V_{50}$  of the spherical scattering particles (A) is in the range from 5 to 20  $\mu\text{m}$ .

Claim 14 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the median size  $V_{50}$  of the spherical particles (B) is in the range from 15 to 60  $\mu\text{m}$ .

Claim 15 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ scratches produced on the screen using a force of at most 0.7 N are not visually detectable.

Claim 16 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the screen also encompasses a backing layer which has a halved-intensity angle smaller than  $6.5^\circ$ .

Claim 17 (Currently Amended): Rear-projection screen according to Claim 16, ~~characterized in that wherein~~ the backing layer has an average surface roughness  $R_z$  in the range from 3 to 40  $\mu\text{m}$ .

Claim 18 (Currently Amended): Rear-projection screen according to Claim 16 ~~or 17~~, ~~characterized in that wherein~~ the backing layer comprises poly(meth)acrylates.

Claim 19 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the thickness of the rear-projection screen is in the range from 0.05 to 5 mm.

Claim 20 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the transmittance of the screen is greater than or equal to 25%.

Claim 21 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the yellowness index of the screen is smaller than or equal to 12.

Claim 22 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the halved-intensity angle of the screen is greater than or equal to 15°.

Claim 23 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the scattering power of the screen is greater than or equal to 0.15.

Claim 24 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that wherein~~ the screen is composed of extruded polymethyl methacrylate with a path difference of at most 25 nm due to optical birefringence.

Claim 25 (Currently Amended): ~~Process~~ A process for producing a rear-projection screen according to ~~any of Claims 1 to 24~~ Claim 1, comprising: ~~characterized in that~~  
~~extruding~~ a moulding composition encompassing that comprises polymethyl methacrylate, spherical scattering particles (A), and spherical particles (B) ~~is extruded~~.

Claim 26 (Currently Amended): ~~Process~~ The process according to Claim 25, ~~characterized in that~~ comprising:  
~~extruding~~ a screen or a film; ~~is extruded and~~  
~~heating~~ the extruded screen or the foil is then heated to 110-190°C for from 5 minutes to 24 hours.

Claims 27-29 (Canceled).